

Contributions to the knowledge of the Fauna of the Canary islands XIX

by

Dr. D. L. UYTENBOOGAART

(Heemstede)

Since my forelast publication on the Coleoptera of the Canary-Islands*, I partook in the International Entomological Congress at Madrid and visited on that occasion the Museo de Ciencias Naturales where I found an enormous well prepared material from the Canary-Islands partly undetermined. I undertook to study most of the anonymous Coleoptera and have already finished the genus *Laparocerus*, between which I detected three new species. Also the Museo de Ciencias Naturales at Barcelona entrusted to me the determination of a small but very interesting collection from the island Lanzarote, collected in the neighbourhood of Puerto Arcife by Mr. E. Balaguer. My intention was to publish my remarks on these collections in the Annales of the respective Museums, but the civil-war in Spain doubtless will for some time to come make these publications impossible and I therefore joined them to those regarding my own collections and those of my wife on the excursion made by 30 members of the Entomological congress to Gran Canaria and to Tenerife, while my friend Mr. B. H. Klynstra collected only Adephaga for himself and presented me with the remainder of his Canarian collection; Miss Longfield from London and Mr. Seyrig from Paris presented me also with some Coleoptera collected on the same excursion and from Mr. Appenhagen at Tacoronte Tenerife, who to my regret has deserted the Entomological ranks, I obtained some interesting Coleoptera, collected in former years.

Below I am going to relate the results of my study of all this material and also of that collected by myself in 1925 and 1927 and not already published**, as far as new and

*) This was No. XVI appeared in Sept. 1935 in Societas Scientiarum Fennica. Commentationes Biologicae VI.3; No. XVII in Tijdschrift voor Entomologie T. 77. 1934 p. 162—166; No. XVIII in Pubblicazioni del Museo Entomologico Pietro Rossi No. 1. 1 Maggio 1936.

**) Tijdschrift voor Entomologie T. 73. 1930 p. 211—235.

interesting species or facts concerning already known species have come to light.

Carabus *coarctatus* Brullé. 5 specimens were collected by my wife in the neighbourhood of the Cruz de Tejada Gran Canaria (1700 M.). These specimens are entirely black, brilliant but without any metallic lustre, the specimens from Los Tilos (780 M.) and Barranco d'Azuaje (485 M.) in my collection are green and red-coppercoloured. I propose for the black aberration the name of *eliasenae*.

abbreviatus Brullé (= *interruptus* Dej.) Several specimens were collected on Montaña Bermeja Tenerife (1425 M.) all with beautiful red and green metallic lustre. I possess 2 specimens from Fuente fria, which are of somewhat greater bulk with the pronotum more elongated and with sharper hindangles; these specimens give the impression of standing between the typical *abbreviatus* and the race *Cabrerae* End. (Prof. Bolívar presented me with a couple of this race collected on Monte de los Silos (1200 M.) From Villafior I possess 2 specimens of *abbreviatus* with an obtuse black colour without any metallic lustre.

Nebria *currax* Woll. Prof. Bolívar collected several specimens along the brook at Lagunetas Gran Canaria (1000 M.). This is the first recovery of the species since Wollaston's time. I am much indebted to Prof. B. for the presentation of one specimen for my collection.

Dyschirius *uyttenboogaarti* Klynstra. Only one specimen from Lanzarote (P. Arecife) See the description in next part of these contributions.

Brosicus *glaber* Brullé. 5 specimens (4 ♂♂ 1 ♀) were collected by my wife in the neighbourhood of the Cruz de Tejada, Gran Canaria (1700 M.) The species has never been recovered in the locality indicated by Wollaston viz. the cindery hills between Las Palmas and the Puerto de la Luz (where nowadays the golf links are situated). Von Heyden announces the capture of one specimen in the "Monte" (1871).

Bembidion *subcallosum* Woll. very common along the brook at Agua Mansa Tenerife (1200 M.). In two specimens the humeral white spots are missing.

Trechus *flavocinctus* Jeann. 8 specimens Monte Aguirre Teneriffe (1400 M.) sifted from dead leaves

and rubbish on the soil under the laurels. This species is abundantly distinct from *flavolimbatulus*. Woll. from Gran Canaria, with which it was formerly confused.

- Trechus** *uyttenboogaarti* Jeann. * 5 specimens discovered in sifting bark and lichen from the laurels in the same locality. Prof. Jeannel tells me that Dr. Cabrera had already suggested to him the probability that the Trechi living on the soil and those living under the bark of the laurels should belong to two different species.
- Carterus** *cordatus* Dej. The museum at Madrid possesses a beautiful series collected by Mr. Manuel de la Escalera and his son at Bajamar Tenerife in 1921. My supposition in No. XVI of my Contributions that the specimen found at Atalaya Gran Canaria might have been introduced to the island by human agency, is therefore erroneous. I again carefully compared the Tenerifan specimens with *cordatus* Dej., this time from the Museum at Amsterdam and from the collection of Mr. B. H. Klynstra at The Hague. There are certainly differences, but also the specimens of the last named collections are different inter se and I feel compelled to consider these differences as individual aberrations. Most remarkable is the vehement brilliancy of the Tenerifan specimens as compared to the European.
- Nesacinopus** *solitarius* Woll. 2 specimen from P. Arecife Lanzarote.
- *fortunatus* Woll. 1 specimen from P. Arecife Lanzarote. Hitherto only known from Gran Canaria.
- Stenolophus** *lanzarotensis* Klynstra. Only one specimen from P. Arecife Lanzarote. See the description in No. XX of these Contributions.
- Bradycellus** *ventricosus* Woll. Sifted from dead leaves on the Mte Aguirre Tenerife. The species was also collected by Mr. Klynstra in the same locality.
- Anisodactylus** (*Anisodurus*) *cupripennis* Germ. Mr. Klynstra collected this species (originally from the Argentine Republic) in the neighbourhood of Las Palmas Gran Canaria. Quite certainly this species has installed itself as a member of the Canarian fauna.

* Description not yet published.

Macarozabrus *laevigatus* Zimm. 2 ♀ ♀ collected by my wife at the Cruz de Tejeda Gran Canaria. She also found the remains of two more specimens. The only one known from Gran Canaria was 1 ♂ collected by myself in the chestnut-wood of Osorio in Oct. 1927. The Gran Canarian specimens are absolutely typical with hardly any trace of stripes on the elytra. In the Museum at Madrid and in the collection of Mr. Klynstra I saw specimens from Tenerife, who, as regards the sculpture are difficult to be distinguished from *crassus* Dej. Superficially one might be inclined to suspect that *crassus* Dej. is only an alpine race of *laevigatus* Zimm. but the fact that the typical *laevigatus* lives in Gran Canaria in exactly the same circumstances as *crassus* in Tenerife points to the contrary. In fact the males are quite different with respect to the character mentioned below.

crassus Dej. Very common on Montaña Bermeja Tenerife (1400 M.). The specimens are all very typical, the males distinguished inter alia by the versus the apex enlarged and flattened posterior tibiae. This character is only indicated in the male of *laevigatus* Zimm.

Calathus

flavocircumdatus. **Nova species.** *C. ascendens* Woll. proxime agnatus et fere aequi magnitudinis sed colore ut in specie *simplicicollis* Woll. Prothorace subquadrato, antice perpauci-postice vix angustato, angulis posticis fere rectis sed ad apicem rotundatis, ad latera vix recurvo acute flavo praetexto, ad basin utrimque marginato in medio simplici, capite prothoraceque ceterum piceis, impunctatis, subnitidis, hoc tenuissime alutaceo ab utroque basis latere fovea tenui sed manifesta corrugata impresso. Elytris profunde striatis interstitiis subconvexis impunctatis tenuissime alutaceis, tertia cum duobus punctis umbilicatis, uno in medio, altero in ultima tertia parte, nona super totam longitudinem punctis umbilicatis versus apicem confertioriter ornata, fuscopiceis, sutura anguste, lateribus latioriter flavopretextis, linea basali in utroque manifeste arcuata, antennis pedibusque flavis, tibiis simplicis. 1 ♂ Lanzarote Puerto Arecife. Femina adhuc latet. Type in my collection.

At first sight this *Calathus* may be distinguished from all the other members of the genus by the sharply yellow-coloured lateral margins

of the pronotum and by each elytron being circumdated by a sharp yellow margin (i.e. as well the side as the suture). It may further be known by its subquadrate prothorax which is somewhat narrowed versus the apex and hardly versus the base, the posterior angles being right but rounded off at the top, the basis being margined on both sides but simple in the middle. The head and prothorax (apart from the yellow margin) are pitchbrown, unpunctuated and shining, under the microscope ($\times 30$) the pronotum shows a minutely alutaceous surface, on both sides of the base is a tiny but distinct corrugated impression. The elytra are deeply striated with somewhat convex unpunctuated minutely alutaceous interstices, on the third interstice two umbilicated points, one in the middle, the other in the last third part, the ninth interstice along its entire length with a row of large umbilicated points more densely together versus the apex, somewhat lighter coloured than head and pronotum, the basal line on both sides distinctly concave. Antennae and legs yellow, the tibiae without long and densely accumulated bristles (fimbriae).

Calathus

angustulus Woll. 2 ♀ ♀ Monte Aguirre Tenerife. Very difficult to collect because of its enormous agility, several specimens escaped. Wollaston classifies the species under the group with "tibiis simplicis" However my two females have their middle- and posterior tibiae adorned with short fimbriae along the apical half as is generally the case with the females of the "fimbriatae" and the males must therefore doubtless show the same character as is the case with :

ascendens Woll. (very common on the Montaña Bermeja) where the female has the middle- and posterior tibiae fimbriated exactly like *angustulus* and the ♂ shows the same character in an increased state. My conclusion is that there is no sharp separation between the two groups erected by Wollaston, *angustulus* and *ascendens* (and perhaps more species) being intermediate between the two.

angularis Brullé, very common at the Cruz de Tejada (1700 M.). Gran Canaria. The males have their middle and posterior tibiae densely fimbriated with long lashes, while the females

Masoreus

also show some trace of this character. The species is moreover distinguished by an umbilicated point at the base of the first elytral stripe. This point is lacking in *canariensis* Har.

nobilis Woll. 5 specimens collected by Mr. E. Balaguer at Puerto Arecife Lanzarote. This species is certainly not identical with *testaceus* Luc., being always of greater size and moreover distinguished by the somewhat sharply protruding anterior edges of the pronotum. She is perhaps a race of *aegyptiacus* Dej.

alticola Woll. 1 specimen Monte de los Silos Tenerife (Miss Longfield) 1 in the Cañadas (Portillo) at 2500 M. Tenerife, is certainly not identical with *Wetterhali* Gyll. (see Winkler's cat.) It is distinguished by the evidently alutaceous obtuse head and pronotum and by the simple scutellum, which is canaliculated in *Wetterhali*.

Blechrus

plagiatus Schaum. 1 specimen collected at P. Arecife Lanzarote.

Metabletus

maximus. nova species. M. obscuroguttatus Dfts. agnatus sed multo major. Alatus, piceus, subnitidus, alutaceus, elytris piceis obsolete striatis fascia longitudinali albidoflava interstias quartam quintamque continente, macula humerali albidoflava oblonga oblique retro directa, in ultima tertia parte fasciaque transversali albidoflava ad suturam interrupta mutuo junctis ornatis. Capite prothoraceque aeneo-nitidis, subtilissime alutaceis, hoc latior quam longus (7:5), elytris oblongis in interstitium tertiam impunctatus. Antennarum quatuor basales articuli nigri ceteri fusci, femora nigra, tibiae tarsique picei. Prothorace minus cordato angulis posticis vix designatis. Long $4\frac{1}{2}$ mM. Habitat insulam Lanzarote. Adhuc semel tantum lectus.

By its relatively enorm size this species may at first sight be distinguished from all the other members of the same genus. It belongs to the same group (alati) as *obscuroguttatus* Dfts. but apart from size the very clear pale yellow pattern on the elytra consisting of a longitudinal fascia reaching from the shoulder in an oblique direction, then occupying the fourth and fifth interstices unto the last third part where it widens into a transverse fascia interrupted by the suture, and the obsoletely but quite visibly striated elytra will be enough to separate them.

The prothorax is less clearly cordate, the posterior angles hardly indicated and the sides from there more gradually narrowed. Type in my collection.

Meladema *coriaceum* Lap. My supposition that the Canarian specimens of *Meladema* should be identical with the Madeiran *lanio* F.* is, according to Mr. W. A. Balfour-Browne, erroneous. The Canarian species is *coriaceum* Lap.

Laccobius *regularis* Rey. According to Mr. Balfour-Browne all the specimens of *Laccobius* mentioned by me under the names: *minutus* L. and *sinuatus* Motsch. belong to *regularis* Rey.**

Nargus *aubei* Jeann. The Gran Canarian *Nargus* which I identified with *pinicola* Woll.,*** is according to Prof. Dr. R. Jeannel a separate species described by him under the name *aubei*.

Phloeobium Boisd. (= *Metopsia* Woll.) *cimicoides* Woll. 2 specimens sifted from detritus under laurels at Monte Aguirre Tenerife. An extremely rare and very remarkable species.

Astenus *megacephalus* Woll. 4 specimens sifted in the same locality as the former.

Staphylinus *brachypterus* Brullé is a common species in the Sylvan districts of Tenerife, it was collected at Monte de los Silos by Miss Longfield, on the Mte Aguirre by Mr. Klynstra and on the Mta Bermeja by myself.

———— *umbricola* Woll. Of this species cited by Wollaston as "rarissimus", 1 specimen was collected by Miss Longfield at Monte de los Silos, 1 on Mta Bermeja by Mr. Klynstra, 1 at las Mercedes by Mr. Klynstra and 4 on the Mte Aguirre by myself.

Heterothops *minutus* Woll. Bernhauer identifies this species with *dissimilis* Grav. but I already expressed my doubt as to the correctness of this identification. I had this time a large material at my disposal collected by Prof. Dr. R. Jeannel and by myself and submitted this to the judgment of Mr. P. van der Wiel at Amsterdam. He writes me as follows:

"All the Canarian specimens have their elytra longer than the pronotum, while in *dissimilis* the elytra are shorter than the pronotum. After this character the Canarian species might be

*) Tijdschrift voor Entomologie T. 73. 1930. p. 216.

**) loc. cit. p. 217.

***) loc. cit. p. 217.

sericans Muls. & Rey., but I have no material for comparison. If it does not belong to that species it is certainly a separate species, distinguished from *dissimilis* Grav. by the following characters :

<i>dissimilis</i> Grav.	<i>minutus</i> Woll.
Head relatively less narrow. Antennae shorter and somewhat thicker.	Head narrower. Antennae long and slender.

The pubescence at the sides of the abdomen less dense and shorter. Elytra shorter than pronotum"	The sides of the abdomen with dense and tolerably long pubescence. Elytra longer than pronotum."
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Most of these characters are also mentioned in Wollaston's description. After my opinion *minutus* Woll. is a separate species, as Ganglbauer mentions in his description of *sericeus* Muls & Rey :

"Das Abdomen sehr fein und dicht punktiert, sehr fein und dicht, ziemlich kurz seidig pubescent, wenig glänzend" These characters are certainly not appropriate to the canarian species. *nigritulus* Grav. As this species has been split up by Joy and by Gridelli in several separate species, I submitted all my canarian material to the judgment of Mr. P. van der Wiel, who has made a special study of this group. He came to the conclusion that of 15 specimens 8 belong to *nigritulus* Grav. sensu stricto (5 ♂♂ and 3 ♀♀) 1 ♂ and 1 ♀ belong to an allied species or to a subspecies of *nigritulus* and 2 ♂♂ and 3 ♀♀ to another allied species or to another subspecies. The habitat of none of these three forms is restricted to one single island.

Philonthus

cruentatus Gmel. Mr. Klynstra took on Mte Aguirre Tenerife one specimen in which the red spot on the elytra is wanting.

Stenus

guttula Müll, Mr. Klynstra took at Agua Mansa Tenerife 1 entirely melanistic specimen. Not only is the red spot on the elytra lacking, but the antennae and legs are also entirely black.

Oligota

inflata Mannh. 4 specimens collected in the garden of the hotel at Orotava Tenerife. In Transactions Ent. Soc. 1871 part II p. 294 this species is called, on the authority of Dr. Sharp *O. parva* Kr. Wollaston expresses his doubt

as to the correctness of this determination and supposes the canarian specimens to belong to a separate species ; Bernhauer determinated my specimens from Gran Canaria as *inflata* Mannh. and my Teneriffan specimens are absolutely identical with those.

Atheta *zosteræ* Ths. I collected on Mte Aguirre Ten. 1 specimen which is entirely black. My specimens from Gran Canaria have light brown elytra and pronotum.

Agathidium *globulum* Woll. Between the coleoptera, which Prof. Dr. R. Jeannel submitted to my judgment there are 3 specimens of this species from Vueltes de Taganana (\pm 1000 Mr) Tenerife, who confirm my opinion that a mistake is to be found in Wollaston's description. As one of the characters, who distinguish *globulum* from *marginatum* St., Wollaston mentions that head and prothorax are alutaceous, but this is precisely the case with *marginatum*. All the canarian specimens I saw (also those in Wollaston's collection) have no trace of an alutaceous sculpture on head and prothorax. On the contrary the elytra of the canarian species are evidently alutaceous in the Teneriffan specimens and hardly alutaceous in the specimens from Gran Canaria.

Oophorus Eschz. *algerinus* Luc. 1 specimen from P. Arecife Lanzarote. Compared by Mr. K. G. Blair with an african specimen in the collection of the British Museum. There is a slight difference in colour. In the canarian specimen the posterior angles and the base of the prothorax are brownish yellow, in the african specimen these parts are dark. New for the canarian fauna !

Drasterius *bimaculatus* Rossi. 2 specimens from P. Arecife Lanzarote. One of the numerous varietates coloris. New for the canarian fauna !

Dryops *gracilis* Karsch. All the canarian specimens called by Wollaston : *prolificicornis* F. and by me : *auriculatus* Geoffr., belong to *gracilis* Karsch, according to Mr. H. Bollow (Hamburg).

Dermestes *domesticus* Germ. 1 specimen from Las Palmas, Gran Canaria. This cosmopolitan species was not yet mentioned from the Canaries.

Carpophilus *dimidiatus* F. and *auropilosus* Woll. are after my opinion ♂ and ♀ of the same species i.e. *dimidiatus* F. The ♀ (*auropilosus* Woll.) is

more convex, of greater size and darker, with longer elytra, sides of the prothorax strictly parallel, only narrowed a little just before the anterior angles. Punctuation coarser. Pubescence very evident. Long \pm 3 mM.

Carpophilus *sp.*? 1 specimen from rotten dates of *Phoenix canariensis* at Orotava Ten. Can not be identified with any of the species known to me. Allied to *hemipterus* L. but smaller, narrower; the yellow spot on the elytra occupies about $\frac{3}{4}$ of the length in such a way, that only the sidemargins, the suture and the last fourth part are dark, the anterior margin of the posterior dark part declines on each elytron versus the suture backwards. Punctuation as in *mutilatus* Er.

mutilatus Er. 19 specimens in rotten dates at Orotava, Ten. A most distinguished species by its strongly enlarged prothorax and the prolonged third joint of the antennae.

Leucohimatium *elongatum* Er. Two couples collected at Agua Mansa Ten. under the bark of a dead *Pinus canariensis*. These specimens are only a little above $2\frac{1}{2}$ mM in length, while Ganglbauer mentions as smallest measure 3 mM. I can not detect any other difference.

Mnionomus *ellipticus* Woll. 2 specimens from Tenerife (one collected by myself and one by Mr. Appenhagen on Mte Aguirre). In both specimens the subcostae on the elytra, mentioned by Wollaston in a foot-note on p. 140 of his *Coleoptera Atlantidum*, are very evident. On the contrary this subcosta is entirely lacking in my specimens from Gran Canaria, who moreover are smaller and slenderer. In other collections I saw under the same name canarian specimens of *Mnionomus*, who in size, habitus and sculpture differ so strongly inter se and from the specimens in my collection, that I suspect that at least three different species are mixed up under the name *ellipticus* Woll. A large material is wanted to penetrate this problem.

Ephistemus *globulus* Payk. 1 specimen in the garden of the hotel at Orotava. In using an enlargement of $\times 110$ I clearly see that the continuation of the prosternum between the forecoxae is margined like in (*Ootypus*) *globosus* Walzl. However punctuation, size and colour are in perfect accordance with *globulus* Payk.

- Holoparamecus** *singularis* Beck. 1 ♂ collected at Puerto Arecife. Lanzarote. New for the Canarian fauna!
- Lathridius** *nodifer* Westw. 2 specimens sifted on the Mte Aguirre Ten. They differ from the European specimens in my collection by the character that the membrane along the prothorax is evidently less curved inwards before the base.
- Litargus** *coloratus* Rosh. (= *trifasciatus* Woll.) 3 specimens in the garden of the hôtel at Orotava. It drew my attention that the antennae of these specimens are abundantly different (especially the 5 last joints)* from those of the numerous specimens of *connexus* Fourcr. = *bifasciatus* F. in my collection. As in none of the systematic works at my disposal (not even in Ganglbauer) any mention is made about such a difference between the antennae of *connexus* and *coloratus*, I began to doubt the synonymy. It is likely that *coloratus* is a

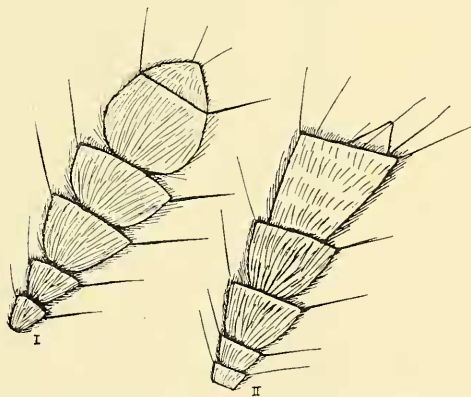


Fig. 1. Sketch of 5 last joints of antenna.
I *Litargus bifasciatus* F. II *Litargus trifasciatus* Woll.
Strongly enlarged.

very rare insect, for I had the greatest trouble to get well determined specimens with undamaged antennae for comparison. At last I got one from the Museum at Amsterdam labelled: v. d. Hoop, Anvers. As *coloratus* is a mediterranean species, this specimen, when well determined, was at all events imported. However as regards colour and sculpture it was in perfect

*) See annexed drawing! Note that the antennae of *bifasciatus* F. are cylindrical, those of *trifasciatus* Woll. flattened.

Tarphius

accordance with Ganglbauer's elaborate description of *coloratus* and to my astonishment the antennae were exactly alike those of my Canarian specimens, who also have the same sculpture and colour. However hesitating, for the possibility exists that the Amsterdam specimen was imported from the Canaries. I am inclined to suppose, that such an evident difference, strong enough to form a generic character, was overlooked by all the authors on this subject, if so, doubtless by neglecting the use of a powerful microscope, which is absolutely necessary for an exact study of insects.

canariensis Woll. **nov. subsp.** *postcostatus* differt a forma typica nodis posticis in elytris costis mediocriter elongatis subiectis, ceteris nodis levioriter expositis. Monte de los Silos Tenerife. E. Appenhagen coll. 11 specimina. A local race distinguished from the type by a more or less strongly developed costa near the apex of each elytron instead of the ordinary nodus (hunch) on the same spot in the typical form, the remaining nodi are less developed than in the typical form, in some specimens more or less obsolete. As in the typical form the prothorax is extremely variabel and the local race has an extreme aberration parallel to *erosus* Woll. Types in my collection. Cotype in the collection of the British Museum.

erosus Woll. I collected 4 specimens of this extreme aberration of *canariensis* Woll. on the Mte Aguirre Ten. The prothorax is strongly scooped out backwards and relatively broader than in the typical form. In two specimens the nodi (hunches) on the apical part of the elytra are somewhat elongated thus causing a superficial resemblance with the subsp. *postcostatus* mihi.

simplex Woll. Several specimens sifted from lichen and loose bark on Mte Aguirre (Cruz de Afuro 1400 M.) Tenerife. A most variable species. In 16 specimens the costae on the apical part of the elytra are as well developed as in *postcostatus* mihi, but the remaining nodi and costae are evidently less developed, flattened and of a clear reddish brown colour. Also the costae on the prothorax are less developed and the prothorax is less enlarged with less curved sides. In 4 specimens all the costae and nodi are badly

developed ; in three more the costae and nodi are obsolete and finally there are three specimens who are completely agreeing with Wollaston's description. Mr. K. G. Blair wrote to me that in the series of the species in the collection of the British Museum the same variability exists. Therefore Wollaston's description is incomplete and not apt to identify the species between its limits of variation.

- Tarphius** *caudatus* Woll. 13 specimens collected on Mte Aguirre Tenerife, together with the former.
- Exochomus** *4 pustulatus* L. var. *floralis* Motsch. 1 specimen from Puerto Arcife Lanzarote. New for the canarian fauna !
- Scymnus** *canariensis* Woll. Very common in the last week of Sept. in nearly all the places visited in Gran Canaria, as well as in Tenerife. Generally there are the following differences in colour between ♂ and ♀ : ♂ the entire head and broad side-margins of the prothorax yellow ; ♀ only the clypeus and the anterior edges of the prothorax yellow.
- Octotemnus** *opacus* Mellié. 1 ♀ sifted on Mte Aguirre Tenerife. This specimen is much darker and obtuser and with a more evident pubescence than the ♂ from Gran Canaria in my collection.
- Scobicia** *barbifrons* Woll. and *ficicola* Woll. In the collection mentioned from P. Arcife, I found one typical specimen of *ficicola* Woll. in perfect agreement with the author's description. On careful re-examination of the material in my collection I came to the conclusion that part of my specimens perfectly agree with the description of *barbifrons*, the remainder with that of *ficicola*, while some specimens show characters between the two. On examining the sexes all the specimens of *ficicola* proved to be ♂ ♂ and all those of *barbifrons* ♀ ♀, and as all my material was reared out of the same branch of *Ficus carica*, I suppose that the two species are in reality only the sexes of one species that ought to be called : *barbifrons* Woll. (Can. Cat. 1864) with the synonym : ♂ *ficicola* Woll. (Col. Atl. 1865).
- Anobium** *velatum* Woll. 2 specimens from P. Arcife Lanzarote. I consider this species as only an insular modification (race) of *villosum* Brullé.
- Piotes** *inconstans* Woll. forma *lancerotensis* nov. var. differt a forma *gamma* Woll. pilis rigidis elon-

gatis in elytris sat dense obsitus, elytrorum costis basalibus magis apertis pilis rigidis densissime obsitis.

Only one ♀ of this well distinguished form was collected by Mr. E. Balaguer at P. Arcife Lanzarote, it differs from Wollaston's var. *gamma* by the rigid elongated setae on the elytra and by the basal costae on the elytra being more evident and thickly beset with rigid setae. Single type in my collection.

Mezium *americanum* Cast. 3 specimens at P. Arcife Lanzarote, all still adorned with rigid white setae at the base of the elytra.

Dignomus *gracilipes* Woll. 1 specimen at P. Arcife Lanzarote.

Oxycarops *fuscipes* Brullé, and *submetallica* Woll. The difference between these two species is so trifling that I suppose them to represent only individual aberrations of the same species. 6 specimens at P. Arcife Lanzarote agreeing for one half with *fuscipes* and for the other half with *submetallica*.

Hegeter *transversus* Brullé. The status *a* Woll. very common on Montaña Bermeja Tenerife. A most variable species. Some specimens are very difficult to distinguish from *tenuipunctatus* Brullé, however the prothorax is always more obtuse with a nearly obsolete punctuation.

————— *tenuipunctatus* Brullé was only collected at the Portillo (entrance to the Cañadas) Tenerife (2500 M.) and not in the higher regions.

————— *lateralis* Brullé, very common round the Refugio de Altavista (3000 M.) Tenerife, only 1 specimen was found in company with the former species at the Portillo. Although very variable like all *Hegeter* species, this one seems to me to be well defined in its general characters.

Pseudotalpophila *polita* Heer, ab. *malleata* nov. ab. differt a forma typica elytris fortiter oblique corrugatis. 3 spec. P. Arcife Lanzarote. The new aberration has a striking superficial resemblance with *Hegeter impressus* Brullé from Gran Canaria so that on first sight it might easily be mistaken for that species. Types in my collection, cotype in the Museum of Natural History at Barcelona.

Gnophota *cribricollis* Brullé and *inaequalis* Woll. I had a correspondence with Prof. A. Schuster (Vienna) as to the respective characters of these species and we both came to the conclusion

Pimelia

that very probably the extremes are local races in formation while between the limits of habitat the distinguishing characters merge into one another. A form which could be referred to the description of both species was very common at the Cruz de Tejeda Gran Canaria (1700 M.). *auriculata* Woll. When visiting Gran Canaria in Sept. 1935 I found to my regret that the dunes between Las Palmas and the Puerto de la Luz are now fastly disappearing, only the most arid part is left. Notwithstanding careful searching I could not find again *Canariella arenapta* mihi, neither *Pimelia* var. *hybrida* mihi, but I collected 4 typical *P. auriculata*. In re-examining the material in my collection I found that some specimens I collected in 1925 and 1927 by their evidently corrugated elytra and by the development of the elytral costae have some affinity to *granulicollis* Woll. (This species was never re-discovered after Wollaston) 1 specimen has even some granuli on the disk of the prothorax. I suspect all these forms to belong to one species, *granulicollis* Woll. and *hybrida* mihi being the two extreme limits of variation.

ascendens Woll. is also a very variable species, as well in sculpture as in general habitus. Having now a large material at my disposal, I observed that the real alpine form (from de Cañadas) is smaller and slenderer than the form that lives in the sylvan districts (f.i. Montaña Bermeja).

canariensis Brullé According to Wollaston (Can. Cat. p. 472) a note attached to the types states that this species was taken by Messrs. Webb and Berthelot on the summit of the Pico de Teyde itself. This statement is doubtless erroneous. Several entomologists have visited since 1836 the summit of the Peak, and in Sept. 1935 I belonged myself to a party of 20, who carefully investigated: partly the so called Pilon d'Azucar, being the ashcone crowning the enormous volcano, partly the range at the foot of the Pilon, without finding a trace of this remarkable *Pimelia*, on the Pilon itself not even a single insect was found. According to Dr. Cabrera *P. canariensis* lives in the extreme south of Tenerife "near the coast" (Medano, Playa de Tefita, Playa de Galletas.).

- Melasma** *lineatum* Brullé. Several specimens were collected by Mr. E. Balaguer near P. Arecife, Lanzarote.
- Phylax** *costatus* Brullé. I collected several specimens of this alpine species at the Cruz de Tejeda Gran Canaria, it is confined to the highest regions of that single island.
- Gonocephalum** *oblitum* Woll. This species cited by Wollaston as an inhabitant only of the eastern islands, was detected by myself in Gran Canaria (T. v. E. T. 73. 1930) and by Mr. Appenhagen in Tenerife.
- Phaleria** *ornata* Woll. Between several specimens collected at P. Arecife Lanzarote, there is one aberrant specimen, much smaller than the limit mentioned by Wollaston, with only one small black spot on each elytron and with nearly obsolete punctuation. I submitted this specimen to the judgment of Mr. K. G. Blair, who considers it as doubtless belonging to *ornata* Woll.
- Pseudostena** *fossoria* Woll. Several specimens collected at P. Arecife, Lanzarote.
- Hypophloeus** *pini* Panz. 2 specimens under the bark of a dead *Pinus canariensis* (Agua mansa Ten.). On careful comparison with European specimens I doubt whether Wollaston's determination is correct. I see differences between the Canarian and the European specimens, but considering the variability of many *Tenebrionidae*, I don't feel justified to describe a new species.
- Cylindronotus** (subgen. *Nesotes* All.) *altivagans* Woll. is not mentioned by Reitter in his "Bestimmungstabellen" (Wiener Ent. Ztg. 1922 p. 158 etc.). With his dichotomic table one arrives at "*gomerensis* Woll." Doubtless *altivagans* is nearly allied to *gomerensis* but its legs are shorter, it has a faint metallic lustre, the punctuation on the elytral interstices is finer and there is no trace of tuberculi near the apex of the elytra, as are evident in *gomerensis*. I collected this species at the Portillo de las Cañadas Tenerife.
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- elliptipennis* Woll. Both sexes collected on Montaña Bermeja Ten. The ♂ is evidently slenderer than the ♀ with the shoulders more drawn in, its antennae, especially the last joints, are longer and slenderer than those of the ♀. My supposition in Tijdschr. v. Ent. T. 77 1934 p. 164 that specimens with thick antennae should belong to another subgenus, was therefore er-

roneous but I didn't suspect that such an important sexual difference should have escaped the attention of all former authors on this subject.

Cylindronotus *aterrimus* Woll. differs from *nitens* Woll. in being of greater size (belongs under 8" in Reitter's dichotomic table) by the fact that the obtuse posterior edges of the prothorax are somewhat scooped out and by the punctuation on the disk of the prothorax being finer and less dense, on the contrary the elytral interstices have a stronger punctuation, *conformis* Gemm. (= *congener* Woll.) collected by Miss Longfield in the Monte de los Silos and by Mr. Klynstra and myself on Monte Aguirre Tenerife. The sexual difference is the same as in *elliptipennis* Woll. It is a most variable species. More or less brilliant, sometimes obtuse, with a more or less evident punctuation on the elytral interstices and sometimes with traces of rows of small tuberculi near the elytral apex. Only in some specimens the flattened side-margin of the elytra is as broad as the last interstice, in one specimen even evidently narrower, this is therefore no general character as composed by Reitter. On the contrary the broad epipleurae of the elytra form a constant character.

Aphodius *hydrochoeris* F. mentioned by Wollaston as universal and common in the Canaries has never been collected by myself, nor by any of my correspondents in those islands; the most common Aphodius, I collected there, is:

Wollastoni Har. which superficially greatly resembles the former species; however, knowing Wollaston's exactness I may not suspect him of having confused both species.

affinis Panz. ssp. *d'Orbignyi* Clouet 1 specimen in Barranco de Silva, Gran Canaria 1927. sp. ? closely related to *Rendalli* Woll. from the Cape Verde Islands by the deeply scooped out border of the clypeus. Two damaged specimens in a cob-web on the Dunos near Las Palmas Gran Canaria. Another specimen closely resembling these but without caput was among the collection of Mr. E. Balaguer, made near P. Arecife Lanzarote.

Psammobius *porcicollis* Ill. On the beach of the Bahia Confital Gran Canaria 1925 and 1927.

- Diastictus** *tibialis* F. (= *sabulosus* Muls.) in company with *Canariella arenapta* mihi in the Dunos near Las Palmas Gran Canaria 1927.
- Rhyssemus** *germanus* L. 1 specimen at P. Cruz (Orotava) Ten. New to the canarian fauna!
- Ootoma** My collection possesses 15 specimens belonging to this genus. As M. de Peyerimhof is busy in writing a monography of this remarkable genus I'll await his publication before enumerating the species.
- Oryctes** *prolixus* Woll. has become a very common insect in the Canaries since Wollaston's time, no doubt by the fact that the heaps of rubbish (composte) on the banana-plantations form an excellent breeding-place for the larvae. The adults were swarming at the end of September. All the females that came to my notice are, relatively to the males, evidently smaller than the females of *grypus* Ill. and *nasicornis* L.
- Hesperophanes** *roridus* Brullé. Wollaston mentions this insect in his Canarian Catalogue on the authority of Brullé (in Webb & Berthelot "Histoire naturelle des Iles Canaries") but says that he can give no information about it. In his "Coleoptera Atlantidum" he even supposes that it was a mere accidental importation from some other country and that probably Brullé had regarded two distinct species as sexes of his *Callidium roridum*. However in this case M. Brullé was correct, *H. roridus*, being not only canarian but truly indigenous and showing indeed the curious difference between ♂ and ♀ mentioned in Brullé's description. Mr. Appenhagen who presented me with 5 ♂♂ and 7 ♀♀ observed the larvae in the stems of the Retama blanca (*Spartocytisus supranubiis*) in the Cañadas of the Pico de Teyde, the adults swarm in the first two weeks of August, a period, during which the Cañadas, because of the unsupportable heat, are seldom visited. The Museum at Madrid possesses also some specimens.
- Lepromoris** *gibba* Brullé, from dead branches of *Euphorbia canariensis*. Isleta, Barranco de Silva Gr. Canaria. 1927.
- Stenidea** *albida* Brullé, on *Euphorbia regis jubae* Isleta Gr. Can. 1927.
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- annulicornis* Brullé on flowers in the Barranco d'Azuaje Gr. Can. 1927.
- Lema** *melanopa* L. Gr. Can. 1925.

- Cryptocephalus** *nitidicollis* Woll. A very common insect on *Achillea millefolium* L. in at least the central and western parts of the archipelago. It is a most variable species as well in size as in colour.
- Chrysomela** *obsoleta* Brullé. Several specimens at las Mercedes and on Mte Aguirre Ten. Sept. 1935.
- *fortunata* Woll. 1 specimen in the Barranco d'Azuaje Gr. Can. 1927. New to the fauna of Gran Canaria!
- *gemina* Brullé Mte Aguirre Ten. Appenhagen coll.
- *sanguinolenta* L. very common Ten. 1925, Gran Canaria 1925 at low and intermediate elevations.
- *bicolor* F. Las Palmas Gran Canaria 1927.
- Aphthona** *paivana* Woll. Gran Canaria (St. Brigida) March 1925.
- Longitarsus** *kleiniiperda* Woll. collected bij Mr. Seyrig at las Mercedes and in the Mte de los Silos Ten.
- *isoplexidis* Woll. ssp. *persimilis* Woll. Orotava Ten. 1925, collected by Mr. Seyrig in the Monte de los Silos Ten. Sept. 1935.
- *inconspicuus* Woll. coll. by Mr. Seyrig at las Mercedes Ten.
- sp? 1 specimen coll. by Mr. Seyrig in the Monte de los Silos Ten. probably *nervosus* Woll. at all events closely allied to that species.
- Chaetocnema** sp? Only one specimen of this beautiful *Chaetocnema* was collected by my wife in the Monte Gr. Can. 1925. It belongs probably to a still unknown species but it seems to me impossible to describe a member of the Halticidae on only one specimen.
- Psylliodes** *vehemens* Woll. Orotava Ten. 1925, El Monte Gr. Can. 1925.
- *hospes* Woll. At the same time in the same localities.
- Hispa** *occator* Brullé. Very common near Garrachico Ten. in April 1925 on *Cistus* at a rather low elevation, 1 specimen at Agua mansa Ten. in Sept. 1935 (2nd. generation?). There is a striking difference in colour between the sexes, the ground colour of the males being of a dark grey, that of the females red, the femora, the basal half of the tibiae and the clypeus are dark in the males and red in the females. Most of the couples were collected in copula.
- Laria** *rufimanus* Boh. common in the region of el Monte Gr. Can. March and April 1925, Orotava Ten. 1925.

- *pisorum* L. coll. by Mr. E. Balaguer at P. Arecife Lanzarote.
- Bruchidius** *lichenicola* Woll. (= *floricola* Woll.) on the male flowers of *Pinus canariensis* San Mateo Gr. Can. 1927.
- *teneriffae* Gyll. common on the flowers of *Spartium* and of *Cytisus proliferus* in el Monte Gr. Can. 1925, 1 specimen in Sept. 1935 on Montaña Bermeja. Ten., on *Cytisus proliferus*.
- Acanthoscelides** *obsoletus* Say (= *obtectus* Say) 1 specimen found by Mr. Seyrig in the garden of the hôtel at Orotava Ten.
- Aglycyderes** *setifer* Westw. This curious insect forming with two species from New Zealand and one from New Caledonia the primitive Rhynchophorus family :
- Aglycideridae** was found in dead branches of *Euphorbia canariensis* at Orotava Ten. in 1925 and reared in number from the same plant from the Isleta Gr. Can. in 1927.



Fig. 2. Wing of *Aglycyderes setifer* Westw. after Bernet Kempers.

Mr. Bernet Kempers investigated the wings of this species and describes them as follows : "2 à 2½ times the length of the elytra, nervature very simple (see annexed sketch), very much resembling that of *Platypus*, my conclusion being that the *Aglycyderidae* are closely allied to the *Platypidae* and therefore also to the *Scolytidae* as far as the wings are concerned."

Other characters point to the *Anthribidae*, but they possess also characters of the *Colydiidae*. Doubtless the *Aglycyderidae* are in many respects one of the oldest and most primitive families of the Coleoptera, but in some respects they are specialised in a particular direction.

Auletobius

cylindricollis Woll. on *Rubus canariensis* at las Mercedes Ten. Sept. 1935.

————— *convexifrons* Woll. ♂ and ♀ collected by Mr. Seyrig at las Mercedes Ten.

Apion *fallax* Woll. (ssp. of *violaceum* Kirby ?) 1 specimen at Orotava Ten. in 1925.

————— *tubiferum* Gyll. at Orotava Ten. 1925. See my remark in Tijdschr. v. Ent. T. 77 1934 p. 165.

Apion

spartocytisi A. G. K. Marsh. (Tijdschr. v. Ent. T. 71 1928 p. 115, T. 77, 1934 p. 165) coll. in numbers on a Papilionææ called Retama blanca by the inhabitants of Gr. Can. which led me to the conclusion that the scientific name was *Spartocytisus supranubiis*. Having now seen in profusion the Retama blanca of the alpine region on Tenerife, I am convinced that the scrub on which I detected in Gran Canaria the *A. spartocytisi* is not the same as the Tenerifan Retama however closely allied to it. This *Apion* is not confined to one Papilionææ for I collected it in Sept. 1935 in the mountains above Teror Gr. Can. on *Cytisus proliferus*.

sagittiferum Woll. a very common insect on the laurels in the central and western islands. Los Tilos Gr. Can. Oct. 1927 Monte de los Silos Ten. (Seyrig) Sept. 1935. This species may easily be distinguished from *urticarium* Hrbst. not only by the characters already mentioned by Wollaston but also by the elytra being more drawn out at the apex in *sagittiferum*, thus being sharper. In both species the difference between the sexes is the same, namely the male rostrum being evidently punctuated in rows and pubescent nearly until the apex, the posterior part near the forehead being obtuse by a fine granulation, the female rostrum longer and slenderer, polished and brilliant from the insertion of the antennae unto the apex, the posterior part most delicately punctuated in rows and pubescent, the anterior part without any trace of punctuation or pubescence. Moreover the female in its general habitus is somewhat shorter and broader than the male. The species is also distinguished by an evident metallic lustre under the squamose covering.

urticarium Hrbst. ssp. *atlanticum* mihi (Soc. sc. Fennica Commentationes Biologicae VI 2, 1935 Contributions Fauna Can. Isl. XVI p. 14) El Monte Gr. Can. April 1925.

delicatulum Woll. (See my remarks loc. cit.). Los Tilos Gr. Can. Oct. 1927.

diverserostratum mihi (loc. cit. p. 13). In the collection of the Museum at Madrid I saw two specimens of this species which I could study at home at my leasure. Both were again males resp. from La Cuesta and from Igueste Ten. Apr. 1921 (de la Escalera!). In the first specimen the underside of the rostrum is pu-

bescent, while the second agrees perfectly with the description. I suspect that *diverserostratum* is only an extreme aberration of the ♂ of *delicatulum*, however strange it may be that this aberration also should be of evidently greater size than the normal ♂.

Apion

rotundipenne Woll. Very common on the laurels in the central and western islands. Orotava Ten. Apr. 1925, Las Mercedes Ten. 1935 (Seyrig), El Monte Gr. Can. March 1925 and Los Tilos Gr. Can. Oct. 1927. It also lives on other plants for I found it in the Barranco de Silva Gr. Can. near the coast, where no laurels were to be seen. The rostrum of the ♂ is straight and shorter than the slightly curved rostrum of the ♀, the male antennae are inserted exactly in the middle, those of the ♀ slightly backwards. There are specimens lacking the purple metallic lustre that is characteristic to the species.

umbrinum Woll. Los Dunos, El Monte Gr. Can. March and April 1925, Los Tilos, Barr. d'Azuaje Gr. Can. Oct. 1927. The female rostrum is longer than that of the ♂, with a fine and dispersed punctuation and with a fine pubescence inserted in rows. The male rostrum is shorter and thicker with coarser and denser punctuation and densely covered with the same squamose setae as the remainder of the surface.

Laparocerus

escalerai nov. spec. *L. undato* Woll. proxime agnatus sed stature minore, rostro elongato apertioriter striguloso-punctato canalicula minus profunda instructa, fovea frontale latiore, fronte impresso, oculis magnis ovalibus convexioribus. Prothorace paulo angustiore, nitido polito parce punctato punctis subtilibus crassisque intermixtis. Elytrorum interstitiis angustioribus nitidioribus multo subtilioriter transverso corrigatis punctis subtilibus tenuibus perpaucis instructis, striarum punctis profundis confertisque sed minus crassis. Callo humerali obsoleto qua ex re humeris angustioribus. Tibiis anticis ad apicem etiam externo dilatatis (subgenus *Wollastonicerus* mihi *) in sexu mascu-

* In my Contributions XVIII (Publ. d. Museo Ent. Pietro Rossi No. 1) I described this subgenus under the name *Wollastonia*, but this name having already been used by Heer (Coleoptera) in 1852 and by G. H. Horn in Publ. Am. Phil. Soc. XIIIp. 433, the name of my subgenus has to be changed in *Wollastonicerus*.

lino interno magis excavatis. Elytris pilis albidis sat elongatis semi-erectis parce vestitis. Long. $11\frac{1}{2}$ mM., 1 ♂ Monte de los Silos Tenerife V. 1921 Femina adhuc latet. Dominis M. M. et M. F. de la Escalera reverenter dedicatus.

Habitus and sculpture of this single male specimen are so typically different from all the known species of *Laparocerus* that I feel justified in describing it as a new species. On superficial inspection it resembles in some respects *undatus* Woll., but is already by its minor size different from that species, in other *excavatus* Woll. having most in common with the last named species, from which however it may easily be distinguished by the non-alutaceous prothorax and by its fine and dispersed punctuation, by the obsolete humeral callus and by the remotely punctuated elytral interstices. The type has no trace of some squamose covering. Unique type in the collection of the Museo de Ciencias Naturales at Madrid.

Laparocerus bolívari nov. sp. L. angustulus niger, nitidus, sat dense squamoso-tessellatus pilisque elongatis pallidis suberectis obsitus; rostro rufo-piceo concavo leviter canaliculato, fronte cum fovea distincta inter oculos; capite leviter sed distincte punctato, oculis modice magnis rotundatis prominentibus; prothorace nitidiore angustulo convexo in lateris aequaliter rotundato, minute et parce aequaliter punctulato, basi leviter sed distincte marginato; elytris elongato-ovalibus ad apicem acuminatis subtiliter sed profunde punctato-striatis, intersticiis minutissime subalutaceo-rugulosis punctis superadditis fere carentibus; antennarum scapo curvato, funiculo brevi, articulo secundo primo vix longiore, art. 5, 6 et 7 breviter coniformibus; antennis, tibiis tarsisque rufo-ferrugineis, femoribus piceis; tibiis anticis ad apicem etiam exterioriter dilatatis (subg. *Wollastonicerus*, mihi) intus rectis. Long 6—7 mM. Tres specimina P. Icod IV 1921, Sanzal II 1921, Fuente fria I 1921.

The characters of this species are so well defined that it is hardly necessary to compare it with other species; it superficially resembles *vestitus* Woll., when at least my presumption

is right that one of the types is a ♂ having a shorter funiculus and somewhat thicker rostrum than the remaining two, *bolivari* however is narrower and less transverse, its punctuation quite different, the big points, so evident in *vestitus* especially on the sides, entirely lacking; the elytral apex more drawn out, the elytra less coarsely striated, the interstices alutaceous and rugulose and nearly without punctuation; the second joint of the funiculus scarcely longer than the first; the anterior tibiae evidently dilated to the outside at the apex. Types in the collection of the Natural-History Museum at Madrid, cotype in my collection. Dedicated to Prof. Candido Bolívar, chief of the entomological departement of the Museum at Madrid.

Laparocerus *rugosicollis* nov. sp. *L. angustulus*, niger, nitidus, sat dense parum aequaliter cinereo-squamosus, pilis pallidis suberectis versus elytrorum apicem remote obsitus, rostro concavo leviter canaliculato versus frontem foveato, et capite subtiliter alutaceis, illo dense tenuiter punctulato, eo subtilissime sat dense punctato punctisque majoribus obsoletis parce irrorato; oculis moderatis rotundatis valde prominentibus; prothorace subcylindrico versus apicem fortioriter quam versus basin coartato, densissime crasse subruguloso punctato, (punctis magnis profundisque) subcarinato, elytris elongato-ovalibus sat fortiter punctato-striatis, interstitiis fere levibus punctis superadditis carentibus, antennis gracilibus (funiculo art. 2, art 1 vix longiore) rufo-ferrugineis, pedibus nigris (tarsis piceis), tibiis anticis rectis ad apicem modo intus ampliatis. Long. 8 mM. P. Icod, Tenerife, IV 1921.

By the sculpture of the prothorax this unique specimen differs so much from all the other known Canarian *Laparoceri* that I feel justified to describe it as a new species; the prothorax is very densely, coarsely and rugulosely punctuated, the punctures being great and deep, it has a fine but evident keel in the middle. No other of the Can. *Laparoceri* possesses such a roughly sculptured prothorax. The other characters are enumerated in the latin description. Unique type in the collection of the Natural-History Museum at Madrid.

Laparocerus morio Boh. After my opinion this species ought to be cancelled as belonging to the Canarian fauna; it has never been collected again in any of the Canarian Islands since the Barao do Castello de Paiva communicated to Wollaston three specimens as Canarian and even if no mistake as to the exact habitat has taken place, I should consider those three as accidentally imported from Madeira.

undatus Woll. The ♀ is somewhat broader than the ♂, the elytra somewhat pressed in along the suture near the base, the big punctures on the prothorax deeper and more evident, the suberect setae somewhat longer. In fresh specimens the elytra are adorned with remote, very long and slender (piliform) white metallic squamae, somewhat denser together versus the apex.

squamosus Brullé. A most variable species as to size and sculpture. Also in the development of the callus humeralis there are rather strong individual differences, however the callus is always evidently less developed than in *excavatus* Woll. In the ♂ sex the rostrum is less strigulose than in the ♀.

grosse-punctatus Woll. There has crept in a mistake in Wollaston's measurements of the species. I found for the length of the ♂ $6\frac{1}{2}$ —7 mM., for that of the ♀ 8 mM.

vestitus Woll. The ♂ is always evidently slenderer than the ♀. A most variable species in size, habitus and sculpture. The typical form and the variation β are found in the same localities from the coast until 1000 M.

obscurus Woll. Even more variable than the former and therefore most difficult to distinguish. The suberect pubescence extends itself over the whole surface of the elytra and is sometimes longer and more rigid near the apex.

The female is always of greater size and of more compact habitus than the male. I saw one ♀ with a fine brilliant carina on the prothorax.

tessellatus Brullé. As variable as *obscurus*. I saw a couple, from Monte Silos Tenerife, with a much denser and coarser punctuation on the prothorax than in normal specimens. In one ♂ from Fuente fria, one ♂ from Laguneta alta and one ♀ from Agua garcia, Tenerife, the big punctures on the prothorax are for the

greater part confluent in such a way that only a few small intervals are left. In the ♂ sex the rostrum is always shorter, the prothorax less expanded and less rounded off at the sides (principally near the base) with right posterior angles (obtuse in the ♀).

Laparocerus *tibialis* Woll. The ♀ is always of greater size and relatively broader than the ♂, the elytra parallel (more oval in ♂).

———— *tetricus*. Boh. The punctuation in the ♂ sex is finer and more remote. I saw one ♂ from Santa Cruz, Tenerife, with a punctuation of the elytra nearly as coarse as that of *tibialis* Woll. while a ♀ found in company with that ♂ has precisely evidently smaller punctures. However in both specimens the punctuation of the prothorax is finer and much more remote than in *tibialis*, principally on the disk.

KEY TO THE DETERMINATION OF THE CANARIAN LAPAROCERI.*

- 1" Scape of the antennae abruptly clavated at its apex, the funiculus long and slender with more cylindrical joints.
- 2" The anterior tibiae dilated at the apex as well to the outside as to the inside (subg. *Wollastonicerus* Uyttenb.).
- 3" The humeral callus evident.
- 4" Surface scarceley with any trace of pubescence, length not exceeding 12 mM., anterior tibiae of ♂ deeply scooped out at inside. Laurel zône of *Tenerife*
..... *excavatus* Woll.
- 4" Elytra with short, suberect, very dispersed hairs, outline elliptic (being rather acute both before and behind) 12—15 mM. Sylvan zône of *Tenerife*
..... *undatus* Woll.
- 4' Surface with a dense, very short and fine decumbent pubescence, outline not elliptic. 12 mM. Sylvan Zone of Palma *sculptus* Brullé.
- 3' The humeral callus obsolete or poorly developed.
- 5" The elytra with at least traces of squamose covering.
- 6" The antennal scape evidently curved, antennae and legs shorter, eyes small, round and very prominent, length not exceeding 7 mM. Alpine region of *Tenerife* *scapularis* Woll.

*) The use of this key can only conduct to an exact determination when controlling the result with the elaborate descriptions by Wollaston and by myself.

- 6' Antennal scape right, antennae and legs longer.
- 7'' Rostrum deeply canaliculated and punctuated.
- 8'' Elytral interstices scarcely punctuated. Rostrum short and thick.
- 9'' Caput convex, rostrum densely and coarsely punctuated, prothorax evidently punctuated with intermixed greater and smaller points, elytral interstices unpunctuated. ♂ narrower and more shining than ♀ with deeper striated elytra 8—11½ mM. Alpine region of *Tenerife* *crassifrons* Woll.
- 9' Caput flat, rostrum with longitudinal strigulose punctuation, prothorax deeply and coarsely punctuated, intermixed with fine minute points, elytral interstices with some very small lightly impressed points. 8—9¼ mM. Sylvan zone of *Ten.* *squamosus* Brullé.
- 8' Elytral interstices evidently punctuated, with dispersed deeply impressed big points, rostrum longer and slenderer. 6½—8 mM. Sylvan zone of *Tenerife* *grosse-punctatus* Woll.
- 7' Rostrum only lightly canaliculated and finely though distinctly punctuated, elytral interstices subalutaceous rugulose but with scarcely any trace of punctuation. 6—7 mM. Sylvan zone of *Tenerife* ... *bolivari* Uyttenb.
- 5' The surface with no trace of squamose covering.
- 10'' Greater (length 11½ mM.). Elytral interstices transversely wrinkled with only some fine and remote punctures, elytral stripes densely and coarsely punctuated, prothorax only remotely punctuated, with very fine and somewhat bigger punctures intermixed. Monte de los Silos *Tenerife* *escalerae* Uyttenb.
- 10' Smaller (8—9 mM.). Elytral interstices even with a more evident and denser punctuation, elytral stripes with more remote and finer punctures, prothorax more evenly punctuated with very fine but deep punctures, with only some indistinct trace of greater intermediate punctures. Ins. *Hierro* on high grassy plains *aethiops* Woll.
- 2' The anterior tibiae only delated to the inside, the outside seldom right, generally faintly curved inwards near the top.
- 11'' The 6th and 7th interstices on the elytra confluent versus the shoulders and jointly erected and inflated, giving the impression as if the shoulders were folded, prothorax conical, at the base very small in proportion to the broad base of the elytra. The whole surface with an extremely dense even grey and black tessellated squamose covering (subgen. *Cyphoscelis* Woll.) 7½ mM. Laurel-zone of *Gran Canaria* *eliasenae* Uyttenb.
- 11' The 6th and 7th interstices of the elytra separated

unto the base, not erected nor inflated, the shoulders simple. The squamose clothing never covering the entire surface. (*Laparocerus* sensu str.).

- 12'' The body without any trace of squamose covering, elytra with a sparse, extremely short decumbent pubescence and moreover with long, soft, erect hairs over the whole surface, the alternate interstices backwards and on the declivity with flat tubercles on which the short pubescence is dense. Surface very shining. $6\frac{1}{2}$ mM. Laurel zone of *Gran Canaria* *doramasensis* Uyttenb.
- 12' The elytra at least with traces of squamose covering.
- 13'' The first and second joints of the antennae of about equal length.
- 14'' The surface at least somewhat shining.
- 15'' The punctuation on the prothorax double, consisting either of a fine punctuation intermixed with some big points or of a coarse punctuation, intermixed with a finer one.
- 16'' Even the disk of the elytra with long erect or suberect hairs.
- 17'' The alternate interstices on the elytra at least backwards and sideways with tubercles, adorned with squamose clothing.
- 18'' The intermixed fine punctuation on the prothorax obsolete, elytra oblong. 9 mM. Mountains of *Gran Canaria* *hirtus* Woll.
- 18' The intermixed fine punctuation on the prothorax evident and dense, elytra broader, not much longer than large.
- 19'' The erect hairs remote and yellow, the elytral tubercles big and evident, alternate interstices backwards evidently undulated. 7—9 mM. Laurel zone of *Tenerife* *inaequalis* Woll.
- 19' The erect hairs darker and softer, elytral tubercles smaller and less evident, interstices only obsoletely undulated. 9 mM. *Palma*. Laurel zone *globulipennis* Woll.
- 17' The elytra without any trace of tubercles.
- 20'' The elytra with suberect hairs and coarse metallic and yellow tessellated squamose clothing. Rostrum evidently canaliculated. Prothorax with a fine rugose punctuation intermixed with greater shallow points. Elytra oblong. $4\frac{1}{2}$ — $5\frac{3}{4}$ mM. *Gomera* *indutus* Woll.
- 20' The elytra with longer erect hairs and darker submetallic squamose clothing. Rostrum broader backwards with a deep fovea. Prothorax with a dispersed deep punctuation intermixed with very small points. Elytra longer, elliptical, with an acute apex. 10 mM. Mountains of *Gomera* *inflatus* Woll.

- 16' The surface free from long erect hairs or these are only to be found near the elytral apex.
- 21'' Elytra elongated oval, habitus slender.
- 22'' Prothorax short, transverse, apex somewhat scooped out, with a dense level punctuation. Rostrum short and thick, not canaliculated. Deep fovea between the eyes. No trace of erect hairs. 8 mM. Mountains of *Gran Canaria* *crassirostris* Woll.
- 22' Prothorax subcylindrical-conical, with a very dense coarse and rugose punctuation and with a fine longitudinal carina. Elytral apex with dispersed whitish hairs. Rostrum concave with a shallow canalicula, backwards with fovea. 8 mM. Pinar of *Tenerife* *rugosicollis* Uyttenb.
- 21' Elytra enlarged convex, habitus short and compact, elytra sometimes with very short dispersed setulae, without any trace of erect hairs. $10\frac{1}{2}$ mM. Sylvan zone of *Hierro* *occidentalis* Woll.
- 15' The punctuation on prothorax simple.
- 23'' Length not exceeding $4\frac{1}{2}$ mM.
- 24'' Elytra oblong with evident suberect hairs.
- 25'' Piceous, prothorax evidently rounded off backwards, with a shallow punctuation. $3\frac{1}{2}$ —4 mM. Mountains of *Gran Canaria* *obsitus* Woll.
- 25' Black, prothorax great, suboval with a dense, deep and sharp punctuation. Anterior tibiae of ♂ evidently scooped out at inside. $4\frac{1}{2}$ mM. Intermediate zone of *Hierro* *puncticollis* Woll.
- 24' Elytra devoid of evident erect or suberect hairs.
- 26'' Subopake, rostrum slender with coarse rugose punctuation, prothorax with a very dense sharp rugose punctuation, elytra with shallow stripes, abruptly sloping down to apex. Antennae and legs short. In the ♂ sex the tibiae, principally the anterior, armed with a horizontal spine. 3,3—3,8 mM. Sylvan zone of *Tenerife* *tenellus* Woll.
- 26' Shining, rostrum short flattened with a fine dispersed punctuation, prothorax with rather dense (non-rugose) punctuation, elytra with deep stripes, more gradually sloping down to the apex, sometimes with traces of dispersed erect hairs. Antennae and legs slender. 3,8— $4\frac{1}{2}$ mM. Sylvan zones of *Tenerife*, *Palma* and *Hierro* *tessellatus* Brullé.
- 23' Length at least $6\frac{1}{2}$ mM.
- 27'' Rostrum narrow and long, eyes small and flat. Habitus short, broad, elytra triangular, with broad shoulders gradually narrowed unto apex, with dispersed robust long and suberect hairs. $6\frac{1}{2}$ —7 mM. Sylvan zone of *Tenerife* *obtriangularis* Woll.

- 27' Rostrum thick, eyes big and prominent, Habitus, especially of ♂, slender, elytra elliptical ovate, shoulders narrow, greatest breadth behind the shoulders, base triple sinuated, stripes shallow, alternate interstices evidently tessellated, with long soft suberect hairs versus apex. $8\frac{1}{2}$ —11 mM. High Sylvan zone of *Tenerife* and *Palma* *ellipticus* Woll.
- 14' Surface opaque or subopaque, (compare also 26").
- 28''' Elytra without any trace of erect hairs, sometimes with a microscopic short pubescence, squamose clothing indistinct, habitus compact, elytra parallel-oblong, jointly emarginated at base, interstices very densely and finally rugose-alutaceous, eyes small and flat, prothorax subconical with a fine dispersed punctuation intermixed with a dense and minute shallow punctuation. First and second joint of funiculus elongated conical. $5\frac{1}{2}$ mM. Sylvan zone of Gran Canaria *sulcirostris* Woll.
- 28''' Elytra with short but evident erect hairs, somewhat less opaque, squamose clothing distinct, habitus still more compact, elytra truncated at base with less rugose interstices, eyes still smaller, prothorax with an even denser and deeper punctuation. Tarsi evidently narrower and shorter. First and second joint of funiculus shorter conical. 3,8— $4\frac{1}{2}$ mM. Sylvan zone of Gran Canaria *compactus* Woll.
- 28'' a. Elytra with long, soft, erect hairs and with a dense submetallic tessellated squamose clothing. Prothorax rounded off at the sides, punctuation on disk shallow, on the sides deeper, intermixed with a dense minute punctuation and with an obsolete carina. Elytra oblong-oval with normal stripes. 10 mM. Sylvan zone of *Tenerife*, *Palma* and *Hierro* *lepidopterus* Woll.
 b. Less opaque with shorter hairs on elytra, prothorax with a somewhat less deep punctuation. $8\frac{1}{2}$ —9 mM. Gran Canaria var β Woll.
- 28' Only elytral apex with tolerably long dispersed erect hairs. Squamose covering less dense, cinereo-metallic; prothorax with a fine, tolerably dense punctuation intermixed on the disk with some deep bigger points and with an evident carina principally backwards and a margined base. Elytral stripes with abnormally big points $8\frac{1}{2}$ —9 mM. Las Palmas Gran Canaria. *seniculus* Woll.
- 13' The second joint of the funiculus conspicuously longer than the first.
- 29'' The elytra without any trace of longer erect or suberect hairs.
- 30'' The elytra with very short suberect setulae at least near apex.
- 31'' The second joint of the funiculus at least twice as long as the first.

- 32" Surface opake.
- 33" Elytra finely and rugosely alutaceous, at base triple sinuated, shortly oval with suberect setulae over the whole surface. Habitus compact. Prothorax subconvex, with a rather sparse very fine and shallow punctuation. 6—7 mM. Sylvan zône of *Tenerife* *obscurus* Woll.
- 33' Elytra even, truncated at base, habitus long and slender. Prothorax long with a deep punctuation intermixed with a minute dense and sharp punctuation. $8\frac{1}{2}$ —9 mM. Mountains of *Gomera* *subopacus* Woll.
- 32' Surface shining, elytra with short fairly coarse suberect hairs near apex ; habitus slender. Prothorax subcylindrical with an even dispersed deep punctuation. 6 mM. *Tenerife* *debilis* Woll.
- 31' The second joint of the funiculus only $1\frac{1}{2}$ times as long as the first, shining, whole surface of the elytra with short suberect setulae. Rostrum concave, canaliculated, with a fine dispersed punctuation, eyes round and prominent. Prothorax with a dispersed deep punctuation intermixed with a very fine shallow punctuation. $6\frac{1}{2}$ — $7\frac{1}{2}$ mM. Mountains of *Hierro* *mendicus* Woll.
- 30' The elytra without even setulae.
- 34" Antennae, especially in the male sex short and robust, scapus less abruptly clavated. Habitus ♀ compact, greater, with a distinct minute intermediate punctuation on prothorax, ♂ slenderer and smaller with only an obsolete minute intermediate punctuation on prothorax ; shining, rostrum cylindrical, somewhat flattened on surface, obsoletely canaliculated with a fine punctuation. Principal punctuation of prothorax very remote, but deep. Squamose clothing cinereous, dispersed. $4\frac{1}{2}$ —5 mM. *Lanzarote*, near the coast *dispar* Woll.
- 34' Antennae slender, scapus abruptly clavated. Habitus slenderer.
- 35" Anterior tibiae deeply scooped out at inside, elytra elliptical, elongated. $5\frac{1}{2}$ —6 mM. *Gomera* near the coast ♂ *gracilis* Woll.
- 35' a. Anterior tibiae right. Elytra oval, shorter, alternate interstices evidently tessellated. In male sex more shining with the inside of the tibiae horizontally uncinated and that of the anterior tibiae finely crenulated. 7,3— $9\frac{1}{2}$ mM. Mountains of *Lanzarote* ... *rasmus* Woll.
 b. Elytra with deeper stripes, legs darker. Mountains of *Fuerteventura* var. β Woll.
- 29' Elytra with long erect or suberect hairs at least near apex. Anterior tibiae right.
- 36" Only apex of elytra with a few remote suberect hairs. Elytral stripes shallow. Narrower $6\frac{1}{2}$ — $7\frac{2}{3}$ mM.

- Gomera* near the coast ♀ *gracilis* Woll.
- 36' a. The whole surface of the elytra with long, soft, erect hairs. Elytral stripes deep. More compact. Elytral interstices with a very dense but shallow punctuation intermixed with a few bigger points. Prothorax with a very fine and dense punctuation intermixed, principally at the sides, with a few bigger points. $5\frac{2}{3}$ — $6\frac{2}{3}$ mM. Coast zone of *Tenerife* *vestitus* Woll.
- b. Somewhat more convex with elytral stripes less deep but interstices more evidently punctuated
 var. *affinis* Woll.
- 1' The scape of the antennae more equally enlarged to the apex, the funiculus shorter and thicker, the joints more obconical.
- 37'' Small (not exceeding $6\frac{2}{3}$ mM.), scrobe (groove) of antennae very deep, short, earshaped, directed upwards above the upper margin of the eyes, eyes small, conical, very prominently directed backwards. The ♀ with a thick high longitudinal carina on the prothorax, greater and broader, with thicker rostrum and less coarse more equally punctuated prothorax, with subtriangular elytra adorned with long hairs; the ♂ with none or obsolete carina, smaller and slenderer, with slender rostrum and coarsely and rugosely punctuated prothorax, with elliptic elytra adorned with shorter hairs. (subg. *Amphora* Woll.) Alpine region of *Tenerife* ... *canariensis* Chevr.
- 37' Greater (exceeding 7 mM.) scrobe backwards evidently dilated, eyes moderately prominent not directed backwards. No evident sexual difference in habitus, only the legs somewhat different according to sex. (subg. *Canopus* Woll.).
- 38'' Elytra opaque with a dispersed and minute submetallic squamose tessellated clothing. The exterior elytral interstices somewhat elevated near apex. Prothorax with a deep and dense rugose punctuation. 11 mM. *Gran Canaria* *subnebulosus* Woll.
- 38' Elytra shining without any trace of squamose clothing. Elytral interstices even.
- 39'' Elytra with a fine pubescence and moreover with long erect hairs. No external difference between ♂ and ♀ Habitus narrow, subcylindrical. 7—10 mM. *Gran Canaria* coastal and intermediate zone (*angustus* Woll.) *grayanus* Woll.
- 39' Elytra without any trace of long erect hairs. Posterior tibiae different according to sex. Habitus broader, less convex.
- 40'' Elytra jointly emarginated at base with an extremely fine and short (microscopic) pubescence, prothorax deeply and densely punctuated, scutellum extremely

small, elytra deeply striated with big quadrate points.

♂ somewhat narrower with the posterior tibiae at the inside before apex abruptly somewhat enlarged. 8.8-11 mM. Coastal zone of *Tenerife* and *Palma*

..... *tibialis* Woll.

- 40' Elytra about rightly truncated at base, about glabrous, prothorax more convex, on the disk less deeply and less densely punctuated (the points smaller, nearly obsolete) scutellum more evident, the points of the elytral stripes smaller. ♂ somewhat narrower, with the posterior tibiae at the inside, before the rather enlarged apex, somewhat scooped out. 8.8-10 mM. Coastal zone of *Tenerife* *tetricus* Boh.

Lichenophagus subnodosus Woll. Extremely common on Mte Aguirre, Cruz de Afuro in the lichen on the bark of the laurels. The species is most variable as well concerning sculpture as colour. The males are somewhat narrower than the females. *impressicollis* Woll. Only one male in the same locality. Easily to distinguish from the former by the form and sculpture of the prothorax and by the evidently longer setae.

Brachyderes sculpturatus Woll. From Mr. Appenhagen I got 23 ♂♂ and 18 ♀♀ from Pinar de la Esperanza, Tenerife. I am now quite certain that the red specimens are immature.

Sitona ocellatus Küst. I possess one specimen from Tenerife coming from Dr. Melichar's collection. As far as I know this species was not yet recorded from the Canaries.

Strophomorphus canariensis nov. sp. a ceteris speciebus generis facile distinguendus per pubescentiam fere deficientem, modo in partem elytrorum posteriorem setulae erectae breves squamiformes in seriebus aequalibus parce interstitiis subpositae presentes; squamis orbiculatis subfuscis aliquid aenescentibus irregulariter albidis permixtis dense tectus. Antennae valde elongatae graciles ut in specie *ventricosus* Chevr. formatae, scapus elongate claviformis modo breviter prostrate aliquo squamiforme pubescens; funiculus clavatus cum setis elongatis erectis et cum pubescentia brevi prostrata sericea. Funiculi articulus secundus $1\frac{2}{3}$ primo longior. Rostrum breve quadratum, transverse impressum in fundo impressionis subtili canalicula instructum usque ad verticem elongata et ibi in foveae speciem

dissipata. Oculi obtuse coniformes retro directi (ut in specie *subciliatus* Reitt.) Prothorax, modice tenuiter densissime punctulatus, fere aequa longitudine quam in medio latus ($\frac{9}{10}$) apud basem lattissimus, ab angulis anticis ad eum locum lateribus tenuiter incurvis, ab eo loco ad basem aliquid coartatis angulis posticis rectis, basi directa tenuiter marginata, in medio tenui canalicula versus apicem et versus basem obsoleta instructus.

Elytrorum linea basalis ad scutellum inconspicuum leviter incurvata; elytra basi arte latiore quam prothoracem, humeris deficientibus, latissima prope medium stern. prim., ad apicem valde coartata acuminata, profunde punctato-striata punctis modice magnis conferte compositis, interstitiis planis, prima, secunda tertiaque ad apicem setulis squamiformibus confertioriter ornatis; subtus conferte squamosus squamis cano-albidis aliquid aenescentibus, orbiculatis in prosterno, metasterno, ventri ac mesothoracis episternis, oblongis in mesosterno ac sub capite. Niger, tibiis tarsisque piceis, antennis fuscis. Long. 8 mM., lat. max $3\frac{1}{4}$ mM. spec. unic. IX 1935. Bosque de las Mercedès Tenerife sub *Rubo canariensi*.

The first of the genus detected in the Canaries. Distinguished from all other members of the genus by the lack of a real pubescence on the surface, only the declivity of the elytra being provided with short erect squamiform setulae, remotely instructed in regular rows on the interstices. The whole body densely clothed with round brownish somewhat metallic squamae irregularly intermixed with white squamae forming hither and thither indistinct spots. Antennae evidently long and slender as in *Str. ventricosus* Chevr. Scape in form of an elongated club with a short decumbent pubescence consisting of somewhat squamiform setulae. Funiculus and clava with a double pubescence consisting of very short sericeous decumbent and of long erect hairs, the second joint of the funiculus nearly $\frac{12}{3}$ times as long as the first. Rostrum short, quadrate, largely concave with a fine canalicula continuous until the vertex where it enlarges itself into the shape of a fovea. Eyes obtusely coneshaped directed backwards as in *Str. subciliatus* Reitt. The prothorax

with a tolerably fine and very dense punctuation, about as long as large in the middle ($\frac{9}{10}$), shortly before the base largest, the sides from the anterior edges unto this point extremely faintly rounded, from this point to the right posterior edges somewhat narrowed, base truncated finely margined, apex truncated, the disk with a very fine longitudinal canalicula obsolete near apex and base. Base of the elytra versus the inconspicuous scutellum somewhat scooped out, hardly larger than base of prothorax, without shoulders. Elytra broadest off the middle of the first sternite, from that point backwards strongly narrowed with acuminate apex, with evident deep stripes, consisting of rather big punctures densely together, interstices flat, the first, second and third near the apex more densely adorned with suberect squamose setulae; on the whole body the punctuation is conspicuous notwithstanding the dense squamose clothing. Entirely black with piceous tibiae and tarsi and brown antennae. Unique type in my collection.

Herpisticus *oculatus* Woll. 3 specimens collected by Mr. E. Balaguer near P. Arecife Lanzarote. Wollaston mentions as one of the principal characters of this species that the second joint of the funiculus is evidently longer than the first; however this is incorrect, as all the specimens mentioned have the two first joints of about equal length. For all certainty I asked Mr. K. G. Blair to compare my observation with the types in Wollaston's collection and he wrote me that the first type has the second joint only slightly longer than the first; he was so kind as to send me the second type for inspection and this has the second joint about equal to the first. Notwithstanding, the species is easily to be distinguished from *eremita* Ol. 1st. by the somewhat more expanded elytra; 2nd. by the smaller, rounder and much more prominent eyes, 3rd. by an evident longitudinal canalicula on the prothorax (if sometimes a seeming canalicula is to be seen in *eremita*, one will find on closer examination that it consists of some confluent ruggedness of the same sort as always exists at the sides of the prothorax) and by its more even surface. 4th. by the longer legs, 5th. by the short rigid hair. Moreover the antennae

are always shorter and slenderer and the greatest specimens of *oculatus* are even minor in size than the smallest of *eremita* known to me. *eremita* Ol. There exist considerable individual differences, so great that one might be inclined to separate them as belonging to different species. The large series, I possess, shows clearly the fact that these differences merge into one another. Most curious is the difference in size, my smallest specimen measuring 11 mM. l. 4 mM. br. and the largest 20 mM. l. 9 mM. br. The elytra of the ♀ are always more expanded than those of the ♂. Melanara May 1925, Barranco d'Azuaje, Isleta, Santa Brigida, Lagunetas, Oct. 1927, Cruz de Tejada Sept. 1935 Gran Canaria, Pinar de la Esperanza (Appenhausen) Agua Mansa Sept. 1935 Tenerife; Gomera (W. May)

Microlarinus *eliasenae* A. G. K. Marsh. * Rather common on *Zygophyllum fontanesi*. Bahia de Gando. Gran Canaria Oct. 1927.

Coniocleonus *excoriatus* Gyll. Las Palmas Febr. 1925, Barranco de Silva Oct. 1927 Gran Canaria, P. Arecife Lanzarote.

Conorhynchus (*Temmorhinus*) *conicirostris* Ol. ssp. *Jekeli* Woll. Faust ** considers these as synonyms but I conceive *Jekeli* as an insular subspecies differing constantly from *conicirostris* by minor size, slenderer habitus and by the tessellated 2nd. interstice. Very common near the coast (Melanara) Gran Canaria May 1925. P. Arecife Lanzarote.

Lixus. *algius* L. Pinar de la Esperanza Tenerife (Appenhausen) not mentioned by Wollaston from the Canaries, only from Madeira.

Amaurorhinus *clermonti* Desbr. From this species, originally discovered in a winecask washed up against the shore near Arcachon (France) I got from M. Clermont a specimen collected by M. Ch. Alluaud in Gran Canaria in 1890.

Mesites *persimilis* Woll. ab. *gomerensis* nov. ab. differt a forma typica elytrorum interstitiis latioribus fortiter oblique corrugatis, levioriter punctulatis; prothorace levioriter dispersioriterque punctulato, fovea frontali profundiore. Bosque del Cedro, Gomera IV 1935. Bolívar et Bonnet coll.

* Tijdschr. voor Entomologie T. 71, 1928 p. 114.

** Deutsche Ent. Zeitschr. 1904 p. 218.

I saw a large material of *Mesites persimilis* Woll. collected by Prof. C. Bolívar y Pieltain and Mr. Bonnet in the island of Gomera at a height of 900—1100 M. and by the kindness of Prof. Bolívar I got 8 specimens for my collection, from these only one specimen answers in all respects to Wollaston's elaborate description (as is the case with those in his collection and with my unique Tenerifan specimen), all the others are more or less aberrant as to sculpture. The extreme form of this aberration (present in 4 specimens) is so strikingly different that one might be inclined to consider it as a separate species and therefore, to avoid confusion, I have given it a name. Types in my collection.

fusiformis Woll. very common in dried up stalks of *Euphorbia canariensis* near Orotava, Tenerife, also many specimens in dried up stalks of *Euphorbia regis jubae* in the Barranco d'Azuaje Gran Canaria, one specimen sifted from rubbish under the laurels at Los Tilos Gran Canaria (most curious as this locality is above the *Euphorbia*-zone), one specimen at Tafira Gran Canaria, and one from the Dunos near Las Palmas Gran Canaria. All the Gran Canarian specimens differ from the Tenerifan by a coarser and denser punctuation of the prothorax, while the depression before the scutellum is less deep and the punctuation in it less dense, the elytral stripes are finer and their punctuation less coarse, the interstices being therefore broader, perfectly plane, (in the Tenerifan specimens somewhat convex). I was inclined to consider the Gran-Canarian specimens as belonging to an insular race and to describe it as *var. jubae*, when I got for inspection two Tenerifan specimens from the British Museum collected by Mr. Appenhagen exactly like the Gran Canarian and later on 4 Gran Canarian specimens from the Museo Pietro Rossi exactly like my Tenerifan, so there might only be made mention of an *ab. jubae*, perhaps originated by difference in food.

Phloeophagia *lauri* Uyttenb. described as *Codiosoma lauri* in Tijdschr. v. Ent. T. 72 1929 p. 351, according to Winkler's catalogue the name of the genus has to be changed. Collected in the laurel grove of Los Tilos Gran Canaria by myself and on

Mte Aguirre Tenerife by Mr. Appenhagen.
See drawing of ♂ penis and of spiculum
gastrale.

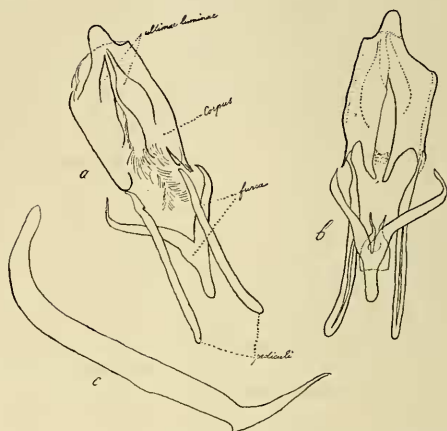


Fig. 3. *Phloeophagia lauri* Uyttenb. a. penis superne visus, b. penis subter visus, c. spiculum gastrale, Enl. X 100.

Eremotes

crassicornis Brullé 2 specimens from a dead
Pinus canariensis at Agua mansa Tenerife Sept.
1935.

Rhyncolus

laurineus Woll. very common in dried up stalks



Fig. 4. *Rhyncolus laurineus* Woll.
a. penis superne visus, b. penis subter visus,
c. spiculum gastrale. Enl. X 100.

of *Euphorbia canariensis* near Orotava Tenerife in April 1925. I have never collected this species myself on the laurels but if in fact a *Rhyncolus* lives on the laurels I am certain that it can not be the same species as that from *Euphorbia*, even if the external appearance is the same. Not knowing which of the numerous specimens in Wollaston's collection are originary from laurels, it seemed to me a bootless affair to find a difference by extirpation of genitalia, even if permission to do so should have been granted to me. However from my own material I have drawn the penis, also to compare it with the same organ of the next species being :

piceus Woll. collected in number from a dead branch of *Ficus carica* in the Barranco d'Azuaje Oct. 1927. In studying the male genitalia of

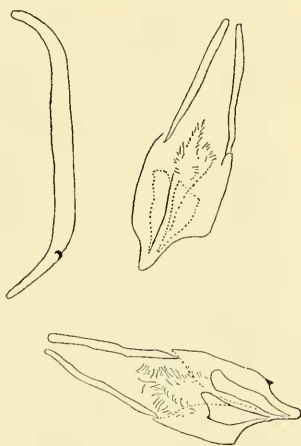


Fig. 5. *Rhyncolus piceus* Woll. penis seen from both sides and spiculum gastrale. Enl. X100

these two *Rhyncoli* and of *Phloeophagia lauri* I experienced the difficulty of getting these organs in a perfect plane under the microscope but at the same time I discovered that a small part of the genitalia namely the spiculum gastrale, which by its extreme minuteness does not offer any difficulty as to get it plane in the preparation, is so strikingly different in the three species that no confusion is possible.

naria Oct. 1927, Las Mercedes Tenerife Sept. 1935.

Neoplinthus *cucullus* Woll. 3 ♀ ♀ specimens in the chestnut-wood of Osorio and one ♂ at Los Tilos Gran Canaria Oct. 1927. As Wollaston's description is very incomplete, I am giving a more elaborate one :

Rostrum rather long, more than twice as long as the head including the eyes is broad, the antennal groove, reaching the eyes, smooth and brilliant but alutaceous by a peculiar extremely fine strigulose sculpture. Eyes elongated oval rather plane with coarse facets, the greatest dimension directed downwards; the forehead evidently concave; base of rostrum enlarged, behind the enlargement with an evident impression on the surface on either side, the rostrum with 7 longitudinal carinae; the anterior margin of the prothorax below and aside with rather long fine setae becoming shorter nearer the upperside; prothorax transverse with rounded off apex evidently protruding and the impression on either side of the carina shallow but evenly enlarged with very great round punctures rather densely together. Base of the elytra hardly broader than base of prothorax, the elytra without shoulders gradually enlarged until the middle, then gradually narrowed, with an evident rather deep transverse-impression on either side before the apex jointly rounded off. The 3rd, 5th and 7th interstices evidently raised, the punctures of the stripes rather remote, big and round. Densely squamose with round pitchbrown squamae. On the prothorax a transverse fascia consisting of light-brown squamae obliquely directed from the hindangles forward to the middle of the disk, on the elytra on the 5th interstice white squamae from the shoulder unto one fourth of the length, behind on the fourth interstice a white spot, on the declivity near the apex a broad interrupted white fascia just before the impressions and a white spot on the third interstice just before the apex. Femora with robust teeth. The last sternites whitely squamose with dark spots in the middle and sideways except on the last-one. The whole surface with short decumbent claviform setulae. The male is smaller and slenderer than the female with the alternate elytral

- interstices less evidently raised and without white spots or fasciae, the squamose covering more reddish especially on the underside, the impressions near the elytral apex deeper.
- Neoplinthus** *musicus* Woll. Fuente fria Tenerife (Appenhagen).
- *velutinus* Woll. Mte Aguirre. Mta. Bermeja Ten. Sept. 1935.
- Alophus** *magnificus* Woll. 3 specimens Pinar de la Esperanza Tenerife (Appenhagen).
- Phytonomus** *fasciculatus* Hrbst. (= *lunatus* Woll.) Barranco de Silva Gr. Canaria Oct. 1927.
- Echinodera** * *angulipennis* Woll. common under the bark of centuries-old laurels at Los Tilos Gran Canaria Oct. 1927.
- *compacta* Woll. with the former but rare.
- *crenata* Woll. 6 specimens sifted from loose bark and lichen on Mte Aguirre Tenerife Sept. 1935.
- *orbiculata* Woll. 5 specimens with the former.
- Acalles** * *brevitarsis* Woll. Santa Brigida March 1925, Los Tilos Oct. 1927 Gran Canaria.
- *instabilis* Woll. Monte de los Silos Tenerife Sept. 1935 (Miss Longfield).
- *seticollis* Woll. Santa Brigida March and April 1925 and Oct. 1927 Gr. Canaria common on a *Spartium* sp.
- Ceutorrhynchus** *quadridens* Panz. Santa Brigida Gr. Canaria Apr. 1925.
- Cionus** *variegatus* Brullé. I saw a large series of this insect in the Museum at Madrid under the name *Mononyx variegatus* Brullé but I came to the conclusion that it has nothing in common with the genus *Mononychus* Germ. (which no doubt was meant by M. Brullé) but is a real *Cionus* sensu str. Sir Guy A. K. Marshall confirmed my opinion and told me that the same insect had been described very correctly as *Cionus luctuosus* by Boheman. Unhappily the law of nomenclature compels us to call the species *variegatus* Brullé as a recompense for that gentleman's unfathomable superficialness proved inter alia by the fact that the beautiful coloured drawing of that insect in Webb & Berthelot shows us a weevil with two claws on either tarsus!

* In Winkler's Catalogus the genera *Acalles* and *Echinodera* have been exchanged for one another as far as the Canarian and Madeiran species are concerned.

Afterwards I got for my collection 1 specimen from Mte Aguirre Tenerife (Appenhagen) and, by the kindness of Dr. F. Zumpt, Hamburg, 2 specimens from Tenerife. I saw myself the feeding-traces of the larvae on a *Scrophularia* sp. in the Bosque de las Mercedes Tenerife Sept. 1935.

Nanophyes *longulus* Woll. 2 ♂♂ and 1 ♀ on *Salix canariensis* in the Barranco d'Azuaje Gr. Canaria Oct. 1927.

Winkler's Catalogue mentions with a ? this species as a var. of *helveticus* Tourn. In my collection I possess 4 specimens (ex. coll. Melichar) determined by Prof. Solari as *N. distinctus* Sol. var. *helveticus* Tourn. These specimens are certainly abundantly different from *longulus* Woll.

Hylurgus *ligniperda* F. Pinar de la Esperanza Ten. (Appenhagen).

Hylastes *Lowe* Paiva. Pinar de la Esperanza Ten. (Appenhagen).

Liparthrum *bicaudatum* Woll. Several specimens in withered stalks of *Euphorbia balsamifera* on the Isleta. Gr. Canaria Oct. 1927. New for the fauna of Gr. Canaria.

————— *ciliatum* Eggers (Tijdschr. v. Ent. T. 71. 1928. p. 283) common on *Ficus carica* at Los Lirios (near Santa Brigida). Gr. Canaria Oct. 1927 and reared in number at home from dead branches from the same locality.

————— *Lowe* Woll. Common in dead stalks of an *Euphorbia* sp. (probably *piscatoria*) near P. Orotava. Tenerife Apr. 1925.

Aphanarthrum *affine* Woll. Very common in withering stalks of *Euphorbia regisjubae* in the Barranco d'Azuaje Gr. Canaria Oct. 1927 and reared at home from those stalks, the appearing specimens becoming paler and paler according to the proceeding desiccation of the stalks.

————— *bicinctum* Woll. P. Orotava Tenerife Apr. 1925, Barranco d'Azuaje, Isleta, Gr. Canaria Oct. 1927 on *Euphorbia balsamifera*.

————— *var. obsitum* Woll. Barranco d'Azuaje, Isleta, Gr. Canaria Oct. 1927 on *Euphorbia balsamifera*.

————— *bicolor* Woll. Orotava. Tenerife Apr. 1925, on *Euphorbia* sp.

————— *canariensis* Woll. Orotava, Guimar Tenerife Apr. 1925, Isleta, Baranco de Silva. Gr. Ca-

caria Oct. 1927 on *Euphorbia canariensis* L. and reared from dead stalks at home with the same result as to the colour of the specimens as mentioned under *affine*.

Aphanarthrum *canescens* Woll. var. *simplex* Woll. a subspecies probably peculiar to Gr. Canaria. In withering stalks of *Euphorbia balsamifera* and *regis jubae* Isleta Gr. Canaria.

———— *piscatorium* Woll. P. Orotava, Tenerife Apr. 1925 in withering stalks of *Euphorbia piscatoria*. I saw specimens from Gr. Canaria (Las Palmas) collected by Dr. Schatzmayr.

Ceropria (Enderl.) *elongata* Eggers (Tijdschr. v. Ent. T. 70. 1927. p. 39) one single specimen collected by my wife in March 1925 in Gr. Canaria (probably near Las Palmas).

Triotemnus *subretusus* Woll. Orotava, Tenerife Apr. 1925, Isleta, Gr. Canaria Oct. 1927 common in dead stalks of *Euphorbia canariensis* L. and reared at home from such stalks.

Coccotrypes *canariensis* Eggers (Tijdschr. v. Ent. T. 71. 1928 p. 117) originally reared by Miss R. Scott Allen from the fruitkernels of some imported Palm from the garden of Santa Catalina. Gr. Canaria. Afterwards found in number in the fruitkernels of *Phoenix canariensis* by the Director of the Botanic Garden at Orotava, Tenerife. He sent to me a number of those kernels from which I not only reared this species but also the next-one. They are in strong competition, the *Coccotrypes* attacking the kernels on the rounded part, the *Dactylotrypes* exclusively in the deep longitudinal furrow.

Dactylotrypes *Uyttenboogaarti* Eggers (Tijdschr. v. Ent. T. 70. 1927 p. 37—39) discovered by my wife in Gran Canaria but afterwards found to be very common also in Tenerife (Enderlein, Director of Botanic Garden) and Gomera (Enderlein) I found the species myself in the garden of the hôtel at Orotava Tenerife Sept. 1935 and attracted the attention of my fellow-excursionists on that insect in the garden of the hôtel at Santa Brigida, Gr. Canaria Sept. 1935. It is no doubt very common everywhere *Phoenix canariensis* is found in the Canaries. When in competition with *Coccotrypes canariensis* Eggers it seems in some cases to be reduced in its necessary quantity of food and then produces specimens, who are exactly alike

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the cotype of *Dactylotrypes draconis* Enderl. in my collection. The Director of the Botanic Garden at Orotava supposes that the competition compels *Dactylotrypes* to look out for a new source of food and that it then attacks the seed of the Draco-tree, these by their smaller oilgrade producing impoverished specimens differing enough from the normal ones to explain their description as a separate species. *nobilis* Woll. Pinar de la Esperanza (Appen-
hagen) and collected by myself from under the bark of a dead *Pinus canariensis* at Agua mansa. Tenerife.
